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Sinking Budgets Spur New Efforts to Boost R&D

Friends of research in Congress and on the White House staff were trying to mobilize support last week against reductions in federal spending on science and technology. Though too late to be effective in this legislative season, the effort showed more vigor and political horse sense than are customarily found in the torpid realm of science politics.

A show-and-tell production extolling the benefits of research was staged on November 8 for a group of Democratic Senators by the President's Science and Technology Advisor, John Gibbons, and the head of the National Economic Council, Laura D'Andrea Tyson. The two have lately teamed up to make the case for research, with Tyson invoking her economics credentials to provide an additional dimension to the argument.

As part of the save-R&D campaign, the White House in recent weeks has issued two reports which argue that federal spending on science and technology produce phenomenal economic returns, which would be squandered, the reports contend, by Republican budget cuts.

R&D Declining in '95, NSF Says—P. 4

New Ways for Science Funding?—P. 5

Meanwhile, Democratic supporters of science and technology were invited into a new task force organized by Rep. George Brown (D-Calif.), who was Mr. Science in the House until the November elections demoted him from Chairman to merely senior minority member on what is now called the Science Committee (See P. 3).

The flurry of activity may convey the impression of a robust community of research supporters looking after their fond interest. But what's really going on is a desperate game of political catch-up for science and technology after a disastrous year on Capitol Hill.

With the gloomy budget script essentially completed for the current fiscal year—though still stalled in the budget strife between the White House and Congress—the main focus of the recent pro-science activities is the Administration's fiscal 1997 budget, now in preparation for delivery to Congress early next year. The big task for supporters of R&D is to pump up broad political support for their cause, a crucial element in short supply during the first year of the Republican Revolution.

The politics in this matter noses into the inscrutable, since Bill Clinton agrees that science and technology must sacrifice to deficit reduction—though in lesser amounts than proposed by the Republicans. They have promised to terminate virtually all federal programs in industrial technology, and cut all the rest of civilian R&D by one-third over the next seven years, whereas the White House has been strong for industrial technology but otherwise fuzzy about its cutting plans for other federal research programs.

As usual, promise and performance have been mangled in the peculiar circumstances of individual research agencies and particular programs. The House, which is the hotbed of the new Republicanism, first voted to include the National Institutes of Health in the general budget reductions, but in the end raised the NIH budget by 5.7 percent—a plump increase in this lean season.

For the President's own lieutenants, navigation between White House cuts and Republican cuts poses a difficult feat of political seamanship, since there's no evidence of strong Presidential interest and commitment on research matters. Clearly, they matter not a bit in Clinton's high-stakes re-

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In Brief

In a letter asking the Maryland legislature to provide $9 million for the Baltimore-based Institute of Human Virology to be headed by Robert Gallo, recently retired from the National Cancer Institute, Governor Parris Glendening wrote that "Dr. Gallo will also be bringing approximately $2 million in equipment, donated by NIH." Queried by SGR, an NCI spokesman said approval has been given for Gallo to take $49,700 worth of lab items—refrigeration equipment, a centrifuge, etc. He's heard there may be a second request, but it hasn't arrived, and no other donations have been approved.

The public is cool is toward the Clinton Administration's industrial-technology programs, according to pollster Lou Harris. Asked whether "to spur economic growth," they favored increased "goverment spending to help businesses develop new technologies such as computer chips?" 57 percent were against, 42 percent in favor, and 1 percent not sure. Republicans, however, are extremely sure, and have voted to wipe out about $1 billion worth of such programs, mainly in the Commerce and Defense departments.

The federal industrial R&D programs are needed to fill gaps caused by the fear of risky research in financial markets, according to Clinton's scientific and economic counselors. The Senate Subcommittee on Governmental Affairs leans on the far-right-wing Cato Institute for guidance on this matter. In a report favoring abolition of the Commerce Department, the Committee approvingly quotes a Cato witness, Edward L. Hudgins, who said, "The market works well without government handouts." To which the Committee added that the awards process "inevitably becomes dominated by the best proposal writers, not necessarily the best technology..."

. . . Doubts About the President's Zeal for Research

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election strategy, in which he aims to depict himself as frugal but empathetic to the needy and committed to promoting prosperity. For campaign purposes, science doesn't sing in that scenario. Comes a crunch, and the President's research team can never be certain about their leader's whereabouts.

Clinton long ago assigned Vice President Gore to look after science and technology, and, to the dismay of the Washington science-policy community, the President has rarely given S&T a nod. The major exception in his nearly three years in office was the speech Clinton delivered October 18 at a White House awards ceremony for the National Medals of Science and Technology. And that was a rambling, cliche-ridden performance that provided no reason to believe that the head man in this country is a keen supporter of science and technology.

New from the White House, two papers arguing the economic case for federal support of R&D:

***Technology and Economic Growth: Producing Real Results for the American People* (14 pp.), order from: Office of Science and Technology Policy, Old Executive Office Building, Room 428, Washington, DC 20500; tel. 202/456-6020; fax 202/456-6019.**

***Supporting Research and Development to Promote Economic Growth: The Federal Government's Role* (15 pp.), order from: Council of Economic Advisers, Old Executive Office Building, Room 314, Washington, DC 20500; tel. 202/395-5084; fax 202/395-6958.**

Nonetheless, Gibbons and Tyson and true believers in Congress have coalesced in support of federal R&D budgets. The November 8 gathering, in a Senate conference room in the Capitol Building, was all Democratic, but with that chamber more moderate than the House and more closely divided politically, a little backbone stiffening can make a big difference.

In attendance were Jeff Bingaman, New Mexico; John Glenn, Ohio; Minority Leader Tom Daschle, South Dakota; Jay Rockefeller, West Virginia; Ernest Hollings, South Carolina, and Joseph Lieberman, Connecticut. All are friends of S&T at voting time, but only Hollings and Rockefeller are prominently identified with the promotion of civilian R&D.

The stated purpose of the gathering was a closed-door Tyson-Gibbons briefing for the Senators on a "White Paper" rehashing arguments that government support of R&D makes economic sense, *Technology and Economic Growth: Producing Real Results for the American People*, dated November 8 and bearing the White House label.

Accompanying the report was a "Dear Laura and Jack" letter from the President, praising the economic gains from research and asserting that "under the guise of balancing the budget," Republicans have vowed fiscal mayhem on federal R&D. The Presidential letter was vague about Clinton's spending designs, merely stating that "my balanced budget plan maintains vital investments in science and technology."

Following the briefing, the press was invited in for a round of comments and responses to questions by Tyson, Gibbons, and the Senators. All were seated around a small table covered with various high-tech objects described in a press sheet as having come into being with the assistance of federal R&D spending. Among them was "Flooring From Recycled Tires and Sneakers," "Smoke Detectors," and a toothy dental display that was said to embody "Mercury-Free Dental Fillings."

Tyson opened the proceedings with a declaration of despair about the Republicans' R&D budget reductions, asserting that "up to half" of the nation's economic growth is attributable to research. The tradition of federal support is an old one, she said, going back to government support for the telegraph in 1842.

Daschle, leader of the Senate Democrats, took up the historic theme, saying that bipartisan support of research goes back at least 50 years. Now, he said, it's "being ended as a result of Republican extremism."

Senator Hollings disputed Republican allegations of political pork and favoritism in the Advanced Technology Program of the National Institute of Standards and Technology. The program, slated for elimination by the Republicans, is peer-reviewed and cost-shared, Hollings asserted.

Senator Glenn accused Republicans of "Luddite budgeting," and then, alluding to Republican allegations of misguided Democratic interventions in the marketplace, added a puzzling note: "We're not trying to pick winners and losers. We're doing basic research"—which is not what the market-bound ATP says it's doing.

The chorus went on, with Senator Rockefeller warning that if the Republicans carry out their budget plans, "the next generation of scientists and engineers will be Japanese and Germans."

Senator Lieberman described R&D reductions as equivalent to "unilateral disarmament" in economic competition.

A reporter asked Gibbons why, in view of the preceding adulation of research, the Clinton budget calls for reductions

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Ex-Chairman Brown Seeks New Backing for R&D

Forlorn in the minority role that he was cast into by the last Congressional election, and prophesying havoc for research if Republican budget cutting prevails, Rep. George Brown (D-Calif.) has cast himself as the Paul Revere of the American scientific enterprise, urging scientists and his Congressional colleagues to fight for research.

For four years, Brown chaired the House Science, Space, and Technology Committee, renamed the Science Committee by his Republican successor, Rep. Robert Walker, of Pennsylvania. Relishing the chairmanship, Brown evolved into the philosopher-Congressman on the relationship of science and society. He was often the keynote speaker at meetings of the major professional societies, which hung medals on him for service to science.

Alas, the change of party control in Congress this year produced an ideological U-turn at the Science Committee, as elsewhere, away from the interventionist, pro-science, pro-spending stance favored by Brown and his party colleagues, and toward a greatly narrowed, thriftier view of the government's responsibilities in science and technology.

The deposed Brown does not get on well with his successor, Chairman Walker, who, as Brown did in his day, sets the Committee agenda and hogs the majority of staff appointments. After 40 years of Democratic control of the House, the Republicans were accustomed to the indignities of minority status. Brown, however, isn't, and has turned to extra-Committee activities to promote his preferences.

On Capitol Hill, Brown is organizing a Democratic task force to oppose fiscal threats to research, while at the same time, he's urging scientists to lobby their Senators and Representatives in behalf of science budgets. Neither gambit has yet produced visible results in the budget, but patience is called for. The dual effort, which Brown has just begun, is actually directed at the budget for the coming fiscal year, FY '97, which begins next October 1. And it is aimed at the White House as well as at Capitol Hill.

The budget for FY '96, now six weeks old and still in limbo, is beyond reprieve. For '97, however, Brown is hoping to prod the White House into sending robust figures to the Congress, where, he hopes, a new alliance of alerted pro-research Democrats and moderate Republicans will resist the reductions written into the downward-sloping seven-year Budget Resolution that was adopted last spring along party lines. Under that budget plan, current federal civilian spending is scheduled to be lower by one third in the year 2002—R&D included.

The approximately $30 billion currently spent for civilian research is a relatively minor item in a $1.5 trillion federal budget. A couple of billion more could make a big difference for research, without breaking the bank. Research, however, lacks the raucous, vengeful lobbies that regularly convoy veterans benefits, Medicare, and other big items through Congress. Brown's pitch is that for the well-being of the country, the importance of the research money exceeds its volume. And his goal is to create enough research boosters to shield R&D from the budget cutters.

As usual, Brown is on the speech circuit, telling scientists that, contrary to Republican assurances, basic research and higher-education support are on the budget block, and haranguing them to take the argument to their Congressional delegations. He doesn't go so far as to recommend the customary electoral tactics of money and votes for political friends, and punishment for political enemies. But he comes close to that traditional formula.

For example, he told the annual meeting of mathematical department chairs at the National Academy of Sciences on October 20 that the budget scythe is sweeping across the entire federal establishment, and warned them: "You are victims of these larger budgetary forces and, given the magnitude of the cuts we are debating, the higher-education and scientific community faces an uncertain future. Your only defense is to mobilize now to prevent larger funding cuts in the future," Brown said, adding: "Your major challenge is that you are not used to thinking in terms of an aggressive political agenda."

How aggressive? Brown notes approvingly that Presidential S&T Advisor John Gibbons has told scientists that "you should be a partisan advocate for science, an effort that does not necessarily put you in the political struggle between Democrats and Republicans." Brown points out, too, that Chairman Walker has urged scientists to visit their Congressmen and explain the importance of basic research.

In addition to advising academics, particularly scientists, to make themselves known as constituents with a stake in federal spending, Brown urges them to emphasize the local economic importance of higher education. Post-secondary education, he pointed out to the mathematics chairs, employs about 2.5 million people, including one million non-professionals. Employment figures for other sectors are one million for the auto industry, 600,000 in textiles, and 250,000 in the aircraft industry. In many states and regions, higher education is the biggest employer, he points out, noting that

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Rallying for R&D *(Continued from Page 2)*

in federal R&D spending.

Not true, said Gibbons. Yes, it is, at least in terms of inflation-adjusted spending, the reporter insisted, referring to a recent report by the National Science Foundation which noted a 1 percent decline this year in federal R&D support.

Gibbons declared that "we're protecting R&D." And Tyson backed him up, saying that the Administration aims to maintain R&D support while other spending declines.

Senator Rockefeller shored up the proceedings with an unqualified assertion: "No one can doubt President Clinton's commitment to R&D."

The reality, however, is that no one can be sure, least of all the R&D advocates closest to the President.—DSG

Government, Industry Slipping in R&D, NSF Reports

Financial growth has virtually disappeared from the major sectors of the American research and development enterprise, and has been replaced in most instances by a slow decline in real purchasing power, according to the latest figures compiled by the National Science Foundation.

The standout exception, though only by a sliver, is university-based research, which will increase by a "real" 0.4 percent this year. The origin of that relatively good fortune is not described, but it probably arises from federal efforts to protect academic R&D, increases in industrial support to universities, and some growth in state assistance. Otherwise, both government and industry—the two largest providers and users of R&D money—are pulling back by about 2 percent, in real dollars.

The NSF report, a two-page quickie headlined "US R&D Spending Will Not Pick Up in '95," states that in inflation-adjusted dollars, federal R&D spending will decline by 3 percent and industrial spending by 1 percent. As a slice of gross domestic product (GDP), R&D's share in the US appears to be in a long-term nosedive—falling from 2.8 percent in 1991 to 2.5 percent in 1994, and 2.4 percent this year. Optimists will note a decline in the rate of decline, but these figures do not reflect the Congressional commitment to substantial reductions in federal R&D spending over the next seven years.

During the early 1980s, the report states, federal and industrial R&D expenditures grew by a real 7 percent per year, and then "tapered off substantially in the mid- to late-1980s, before turning negative in the early 1990s. Most of the national decline in inflation-adjusted R&D support," NSF states, "stems from reductions in federal spending, but growth in industry R&D support also slackened considerably."

NSF says that slippage in total national R&D spending is also occurring not only in Germany but in Japan, which is often held up by Administration policymakers as a paragon of steadfast support for R&D. However, the latest figures presented for both those countries are fairly stale. The R&D/GDP data for Japan shows a decline from 2.9 percent in 1990 to 2.7 percent in 1993; for Germany, the R&D share fell from 2.9 percent in 1989 to 2.5 percent in 1993. The absence of data beyond 1993 invites wonder about the relevance of NSF's international comparisons. The Japanese government has recently announced plans for a big increase in R&D spending, and fresher figures are surely available for Germany.

The NSF report, a ***Data Brief*** (Vol. 1995, No. 13), is available without charge from: National Science Foundation, Science Resources Studies Division, Suite 965, Arlington, Va. 22230; tel. 703/306-1773; e-mail: databrief@nsf.gov

Brown's Campaign *(Continued from Page 3)*

the University of Maryland holds that distinction in its state, while the University of Pennsylvania is the largest employer in Philadelphia.

Basically, Brown's advice to science and higher education is to make politics know you're there, whether by piggybacking visits to Congress while on scholarly business in Washington or bringing candidates to campus for election debates.

Meanwhile, Brown has been assembling a Democratic task force—without a formal name, so far—to support science budgets. Late last month, White House Chief of Staff Leon Panetta met with Brown, Rep. John Tanner, of Tennessee, and Senators Jeff Bingaman, New Mexico; John Glenn, Ohio, and Joseph Lieberman, Connecticut, to hear them plead for protection of research funds when the White House and Congress meet to work out a budget for the current fiscal year. And they have been promised a meeting with the President to argue for a generous level for research in next year's budget, now nearing completion in the depths of the Office of Management and Budget.

With Congressional Republicans determined to run the government in their own fashion, the President's budget is far less important than it used to be as a starting point for deliberations on Capitol Hill. But if the White House is soft on financial support for research, the case against the Republican budget-cutting plan becomes hopeless.

NSF Slow on Violence Study

The National Science Foundation says that only bureaucratic tardiness and crowded agendas have delayed a decision on whether to proceed with plans to establish a Consortium for Violence Research that was advocated for NSF by the last Democratic Congress.

Skeptics in the ranks of the social sciences say that explanation is partially valid. The delay, they contend, is also attributable to the changed political climate and a tendency toward caution at the top of NSF.

Early in the new Republican regime on Capitol Hill, harsh words about the social sciences were uttered by Chairman Robert Walker of the House Science Committee, with particular reference to research on violence. Though he later backed off, the episode rattled the social sciences and its NSF financiers.

NSF now says that, following several scheduling problems, a proposal for the Consortium will be considered at the Nov. 16-17 meeting of the National Science Board, the policymaking body for the Foundation.

With $2 million earmarked last year by Congress for the Consortium, NSF issued a solicitation for proposals last March, with a May 1 deadline. The announcement said the Consortium would be funded for five years, at a total of $12 million, with the Departments of Justice and Housing and Urban Development also providing support. Since then, NSF has been publicly silent on its plans.

Thinking the Formerly Unthinkable About R&D Funds

A kind of "let's pretend" exercise at the Congressional Research Service (CRS) on future funding and policy for federal support of research and development is causing consternation in Washington science-policy circles, particularly in the Democratic sector.

Though the background paper for the proceedings is clearly described as a non-exhaustive list of "potential scenarios," it was limited to four models predicated on a big nosedive in overall federal support of R&D. Given the fiscal-political tides in the capital, the models reflect today's reality and point to the probable future. The contrary view, however, is that, in failing to state the case for generous federal support of R&D, they are defeatist, self-fulfilling prophecies.

Titled "Exploring Alternative Models of Federal Support for Research and Development," the 26-page paper was the centerpiece of a day-long workshop November 1 organized by the Science Policy Research Division of the CRS, a branch of the Library of Congress. In other times, the workshop probably wouldn't have drawn much attention. But with the Congressional Office of Technology Assessment out of business, the CRS Science Policy Division assumes greater importance as a source of science-policy guidance for the Congress. CRS's Michael Davey, who organized the meeting, told SGR that it was planned in March, long before OTA's fate was sealed, and was merely part of the Division's ongoing activities in science policy. Nonetheless, the proximity to OTA's demise naturally draws attention in a capital city where innocent coincidence is rarely conceded.

The workshop participants, numbering about 20, included academics, representatives from industry, federal R&D agencies, the right-wing CATO and American Enterprise Institute think tanks, the American Association for the Advancement of Science, and the Washington office of the European Commission. In observer capacity were Congressional staff members. As is customary with CRS workshops, the press was not invited or notified of the proceedings.

The discussion paper opens with a concise history of federal R&D support, and after tracing the continuing decline of government money relative to industry's own funding of R&D, proceeds to describe four "alternative models of federal support for R&D." Extending from the unacceptably absurd to the plausibly possible, *de rigueur* in the Washington craft of option writing, the offerings are as follows:

"I. Federal Support for Research and Development Would Be Aimed at Meeting National Security Needs."

Taking a "narrow view of national security," this improbable formulation would have the federal government support R&D, including basic and applied research, "for defense purposes only." Carrying on in this spirit, the CRS paper states, "Over the next five to seven years, all other Federal R&D activities would be eliminated. Existing Federal R&D infrastructure would be sold, leased, or shut down. Responsibility for funding R&D in such areas as health, space, the environment, and energy would rest with industry."

Declining Federal Role

From a Congressional Research Service paper, "Exploring Alternative Models of Federal Support for Research and Development."

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In 1982, industry for the first time funded over 50 percent of the total national R&D effort; since 1992, industry has funded 59 percent of the country's R&D, while the government has funded 36 percent. In addition, the industrial community has displayed a decreasing dependence on federal funding for internal research and development. Between 1985 and 1990, the government financed an average of 31 percent of the work performed by industry; between 1990 and 1994, the government financed only 22 percent. In 1994, federal dollars were only 19 percent of the funding used in industrial R&D and were primarily concentrated in aerospace and communications equipment.

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For every dollar industry spent on R&D in the 1990s, an average 8 percent went to basic research. This is in contrast to an average 23 percent for applied research and 69 percent for development activities. The average annual growth rate of industry funding [for] applied research between 1986 and 1994 was 2 percent. In four of the eight years, there was either no growth or a decline in support. During this time, industrial spending on development averaged an annual growth rate of 3 percent. As with funding for applied work, there has been no discernable increase in support between 1992 and 1994.

*

[Growth in federal R&D funding] appears to have stopped and is likely to decline for at least several years. Pressures to reduce the federal budget are and will continue to take a toll on federal R&D funding, which is a significant fraction of the discretionary portion of the budget.... The budget projections of both the Administration and Congress call for reductions in several areas of R&D over the next five to seven years, although there are substantial differences in what areas to cut.

The federal close-out would extend to educating scientists and engineers—with the responsibility shifting to the states, industry, and private foundations, except for meeting national-security requirements. The primary role of the federal government would be to devise tax, trade, fiscal, and regulatory policies that would stimulate R&D investment by the private sector and non-profits.

SGR asked a workshop participant whether this formulation wasn't so kooky as to be unworthy of serious discussion. He replied, "Some people there didn't think so."

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. . . Emphasis on Basic Research in One Scenario

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"II. Federal Support for Research and Development Would Be Aimed at Meeting Broad National Security Needs."

A slightly softened version of option I, this one would limit the defense share to 70-80 percent of all federal R&D spending, with the balance allotted to environmental clean-up, space, and public health.

The environmental work would be confined to areas contaminated by the government, and would be phased out "once the government had completed clean-up of these sites." Public health research would be focused on "newly emerging threats in the area of infectious diseases." Cited as examples are AIDS, Lyme disease, toxic-shock syndrome, Legionnaires' disease, hantavirus pulmonary syndrome, food-borne illnesses, and tuberculosis. The fantasy element in this option game is evident in the absence of cancer research, which is always tops in public and political support.

Federal space spending would focus on "completion of the space station," with "modest" support of basic and applied research related to operating the facility.

Finally, "Over the next five to seven years, all other Federal R&D activities would be eliminated. The existing Federal R&D structure would be sold, leased, or shut down"—and so on, with industry and non-profits, as above, stimulated by beneficent federal policies into taking up the former burdens of government.

"III. Reduce Support for Federal R&D by Thirty to Fifty Percent."

Political realism begins here—as reflected in the real-life Republican Budget Resolution, which provides for a one-third reduction in federal spending, R&D included, by 2002. The CRS says that under this option, the present 55-45 percent military-civilian split in government R&D spending would be evened to 50-50, at least half of the government's 700-plus labs would be shut down or sold, and federal support for civilian technology would be terminated or transferred to the private sector.

Basic research would continue to receive government support, but the amount would decline by a real 10 percent over the next seven years. The CRS paper quotes Chairman Robert Walker (R-Pa.) of the House Science Committee as saying that government-supported basic research should be "long-term and non-commercial, pursuing revolutionary ideas that make possible the impossible, avoiding funding research that is, or could be, conducted by the private sector."

Addressing the withdrawal of federal funds, the CRS paper looks to the private sector, universities, non-profits, and foundations, saying that they "would be expected to fill the void." In support of this dubious expectation, it is noted that, prior to the post-war burgeoning of federal support for research, private foundations provided substantial funds, whereas today they account for only six percent of funding for research. Cited, too, is a recent family gift of $100 million to the University of Utah.

Under the scenario of a 30-50 percent decline in federal research funds, the CRS paper states, federal funds for PhD training would be limited to "the needs of the Federal government and the support of basic research." It adds that "Education of PhDs would not be used as a primary justification for increasing Federal support for university-based research."

"IV. Federal Support for R&D Would Focus on Broad-Based Support for Basic Research."

The offering here is an ideologically mixed bag of policies and funding shares. The CRS paper calls for a shrinkage of "up to 30 percent" in federal support of applied research and development over the next five to seven years, along with an annual increase for basic research of two percent above inflation. Defense R&D would be relegated to a 20-30 percent share of the federal total. The federal government would support a "broad array" of basic research, and would encourage collaboration by government, industry, and academe. Technology transfer of the ensuing results would be entrusted to "a *laissez-faire* approach," though in "some selected areas, the government, working with universities and industries, would take a direct role in funding both research and research aimed at broadening the nation's technology base."

Under this scenario, the National Science Foundation, as a mainstay of basic research, would dispense with peer review for some of its funds and rely on the "strong manager system" employed by the Pentagon's Advanced Research Projects Agency. The CRS paper states, "A related proposal calls for funding a 'star' system of scientists under which financial support would be proportional to a scientist's past productivity."

Continuing with option four, the CRS paper says federal support for applied research and development would be confined to the government's own needs, except that "in some instances, limited federal support would be available, on a cost-shared basis and for a specified time period, to targeted industries, such as in robotics, that lack sufficient size or coordination to carry out R&D on an effective scale."

The background paper is described as "an illustrative vehicle for exploration and to stimulate discussion." Next to come, SGR was told, is a paper distilling the issues and proposals for distribution to members of Congress.

What's notable about all this is how the recently unthinkable has become grist for serious deliberations.

Vice President Declines to Attend

The spitting match over the ozone hole between Vice President Gore and Rep. Dana Rohrabacher (R-Calif.) will continue at long range only. The word is that Gore, who accused Rohrabacher of "Stalinist tactics" in criticizing environmental concerns [SGR Oct. 15], does not intend to accept the Congressman's invitation to testify at a hearing.

In Print

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From the defunct Congressional Office of Technology Assessment (OTA), a continuing trickle of reports in preparation when the agency was officially terminated, September 30. (A small staff will remain until January 31 at the old OTA office: 600 Pennsylvania Ave. SE, Washington, DC 20510; tel. 202/224-3695):

Impacts of Antibiotic-Resistant Bacteria (GPO Stock No. 052-003-01446-7; 183 pp., $13), notes the threat of drug resistance, and presents suggestions for policy guidance aimed at "1) prolonging the effectiveness of currently available antibiotics through infection control and optimal use of existing antibiotics and 2) developing new antibiotics to treat resistant bacteria." Among the specific options raised for Congressional consideration are establishment of a federally financed national surveillance system to track antibiotic resistance and additional funding for "research into the basic biology of bacteria." The report states that the "amounts of federal money spent on non-AIDS research have not increased in parallel with the increasing inroads being made by antibiotic-resistant bacteria," adding that "a few million dollars ... could produce a marked increase in the amount of research being done." Requested in the last Congress by pro-interventionist House and Senate legislative committees with jurisdiction over Public Health Service agencies, the report now arrives in a Congress dedicated to shrinking the federal role. Michael Gough of the OTA was Project Director for the study.

Advanced Automotive Technology: Visions of a super-efficient family car (GPO Stock No. 052-003-01440-8; 38 pp., $3.75), looks ahead 10 to 20 years and sees good prospects for developing high-efficiency, mass-market, gasoline-powered mid-size vehicles, "without shifting to exotic technologies" such as fuel cells or electric propulsion. Their time may come, OTA states, but "new technologies historically have not penetrated the automobile market by jumping full blown into the most demanding applications." The vehicles of the near-term future, OTA says, would employ continuously variable transmissions, low-emission engines, aluminum bodies, and low-resistance tires. Costs would be about $1500 above today's prices, and performance would be comparable, with substantially lower fuel consumption. OTA says government money and prodding are needed to encourage innovation by industry, but notes that advanced-vehicle R&D is "poised for a downturn, owing to budget cuts."

In a statement accompanying release of what he referred to as a "swan song" report from OTA, Senator John Glenn (D-Ohio) said Congress will regret the absence of the agency "in future years when sound advice is needed on technical matters from an impartial, competent and dedicated source." Steven Plotkin of the OTA staff was Project Director for the study.

Environmental Monitoring for Nuclear Safeguards (GPO Stock No. 052-003-01442-4; 56 pp., $4), says standard techniques for collecting and analyzing soil, air, water, and biological samples could add a new dimension to means for detecting clandestine nuclear activities. The costs would be modest, OTA concludes, and would strengthen the non-proliferation activities of the International Atomic Energy Agency.

Order from: New Orders, Superintendent of Documents, PO Box 371954, Pittsburgh, Pa. 15250-7954; tel. 202/512-1800; fax 202/512-2250. Add 25 percent for foreign orders.

OTA Archive on CD-ROM

The large body of work produced by OTA between its founding in 1972 and demise this year is going to be preserved on CD-ROMS that will be available early in 1996, according to an announcement from the skeleton-crew headquarters now winding up OTA's affairs.

Meanwhile, electronic versions of 1994-95 reports are available through OTA Online, the agency's Worldwide Web site (http://www.ota.gov). They also can be accessed through the following Web sites:

Government Printing Office (http://www.access.gpo.gov/ota)

National Academy of Sciences (http://www.nas.edu)

Woodrow Wilson School of Public and International Affairs, Princeton Univ. (http://www.wws.princeton.edu)

A few reports in the final stages of preparation for release are all that remains of the backlog on hand when Congress voted to terminate OTA, effective September 30.

A group of OTA alumni have been seeking financial support for a non-profit successor organization, incorporated as the Institute for Technology Assessment. So far, they report, they have encountered a lot of good will and encouragement, but no significant amount of money.

When OTA went under, it was running on $22 million a year.

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In Print

Official reports and other publications of special interest to the research community

(Copies of publications listed here are available from the indicated sources—not from SGR)

From the Department of Health and Human Services, Office of Research Integrity (ORI):

Consequences of Whistleblowing for the Whistleblower in Misconduct in Science Cases (60 pp., plus appendix; no charge), concludes from a study of 68 accusers in ORI cases that whistleblowing often brings unpleasant results for complainants. Twenty-five percent of the whistleblowers reported they were ostracized by colleagues, 20 percent said their research support was reduced, and one in seven said they were threatened with a law suit or actually were sued. A high proportion of the most severe retaliatory deeds, ORI found, were performed by institutional officials. One-third, however, reported no adverse consequences. Noting the limited number of cases in ORI files, the report cautions that the data tell nothing about episodes that failed to receive official certification or that went unreported "for fear of retaliation or for other reasons." The report was produced for ORI by the Research Triangle Institute.

Order from: Office of Research Integrity, Rockwall II Building, Suite 700, attn. Robin, 5515 Security Lane, Rockville, Md. 20852; tel. 301/443-5300; fax 301/443-5351.

From the National Institute of Mental Health (NIMH):

Basic Behavioral Science Research for Mental Health: A National Resource (NIH No. 95-3682; 137 pp., no charge), two years in preparation by a big assemblage of behavioral researchers working under the National Advisory Mental Health Council, calls for more money for basic research at NIMH and a greatly broadened research agenda that might entail merging the NIMH peer-review system into the NIH review apparatus. Though "new" money is scarce, the long-neglected behavioral sciences have several influential boosters on Capitol Hill, as reflected in supportive language in the latest crop of appropriations reports.

Order from: National Institute of Mental Health, Publications, 5600 Fishers Lane, Room R7-C02, Rockville, Md. 20857; tel. 301/443-4513.

From the Congressional Budget Office (CBO):

High-Tech Highways: Intelligent Transportation Systems and Policy (44 pp., no charge), says the "jury is still out" on the five-year-old Intelligent Transportation Systems (ITS) program, managed by the US Department of Transportation, with the aim of applying electronic systems to traffic management. Noting a mixed record of successful and "floundering" projects, the CBO cautions that "many observers are asking to see results." Spending authority for the program has been moving in the fast lane, rising from $20 million in 1991 to $227 million last year. Though less than one percent of federal spending for highways and mass transit, the CBO says it's important, because decisions based on ITS research "could have profound implications" for transportation technology over several decades." Elizabeth Pinkston of the CBO Natural Resources and Commerce Division wrote the report under the supervision of Jan Paul Acton and Elliot Schwartz.

Order from: Congressional Budget Office, Publications, Room R-413, Ford House Office Building, 2d and D Sts. SW, Washington, DC 20515; tel. 202/226-2809.

From the Association of American Medical Colleges (AAMC):

Taking Charge of the Future: The Strategic Plan for the Association of American Medical Colleges (20 pp., no charge), cites "wrenching changes" that confront medical education, research, and patient care, and outlines a larger role for the AAMC, Washington lobby for the nation's 126 medical schools, plus hundreds of training hospitals and research institutions. In addition to setting up more committees and holding more meetings, the AAMC says it is "intensifying its advocacy efforts" in Congress. To accomplish this, it is "hiring experienced consultants to help shape strategies and tactics; and augmenting its inhouse governmental relations staff." Among the goals listed in the Strategic Plan is "a reduction in the number of international medical graduates who train and eventually practice in the United States."

Order from: Association of American Medical Colleges, Publications, 2450 N St. NW, Washington, DC 20037-1126; tel. 202/828-0416; fax 202/828-1123.

From the General Accounting Office, no charge:

FDA Drug Approval: Review Time Has Decreased in Recent Years (GAO/PEMD-96-1; 44 pp., no charge), a welcome appraisal for the Food and Drug Administration, routinely accused by Republican deregulators of needlessly delaying the availability of life-saving medicines. The GAO reports a substantial speedup in the approval of New Drug Applications, with average time dropping from 33 months in 1987 to 19 months in 1992. Addressing charges of speedier action in other countries with high pharmaceutical standards, the report says "overall approval times are actually somewhat longer in the United Kingdom than they are in this country." The reduced approval time in the US, the report states, "is real and is not an artifact of how time is measured." And in a direct slap at the deregulators, the GAO says that "the magnitude of the reduction—more than 40 percent—should be considered in the ongoing discussions of the need to change the NDA review process or the agency in order to speed the availability of drugs to patients."

Superfund: Operations and Maintenance Activities Will Require Billions of Dollars (GAO/RCED-95-259; 29 pp.), says federal and state governments and "responsible parties" face huge long-term costs for operations and maintenance activities designed to prevent erosion and other backsliding at Superfund clean-up sites.

Order from: USGAO, PO Box 6015, Gaithersburg, Md. 20884-6015; tel. 202/512-6000; fax 301/258-4066.

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